

THE CLASSICAL CONCEPT OF THE LENDER OF LAST RESORT

Within the past ten years, a series of events has raised questions about the soundness of modern financial systems and reawakened interest in what is known among monetary economists as the lender of last resort responsibilities of the central bank. The concept of lender of last resort relates to the question of how a central bank should react to a financial crisis and involves, in particular, a prescription for central bank action to preserve the liquidity of the financial system and to forestall financial panic. The term itself originated in the writings of Walter Bagehot, a leading British writer in banking and finance in the second half of the 19th century. But the idea behind it is of an earlier vintage and several well-specified prescriptions for central bank action to prevent panic can be found, in particular, in the copious literature centering around the problems of the Bank of England in the period 1797 to 1844.

Among the more dramatic of recent events which have revived interest in the lender of last resort function have been the credit crunch of 1966, the credit squeeze in the commercial paper market in 1970 associated with the Penn-Central crisis, and, most recently, the distress and ultimate demise of Franklin National Bank. In each of these cases, the actions of the Federal Reserve and other bank regulatory authorities provoked discussion centering on the following interrelated issues.

1. What is the appropriate response of a central bank in times of financial crisis? Should it try to prevent or forestall an initial bank failure that might trigger a panic? Or should it act only to prevent the primary failure from spreading to other institutions? These alternative responses correspond to two contrasting views of the duty of the lender of last resort. The first holds that the central bank's job is to prevent the occurrence of shocks or at least minimize their initial impact on the financial system. A second view is that the lender of last resort exists not to prevent shocks, but rather to minimize the adverse repercussions of such shocks either by insulating the sound institutions from the distress of the unsound ones or by insuring that the banking system is sufficiently strong and resilient to absorb shocks.

2. Is the lender of last resort's primary responsibility to the individual bank or to the market, i.e., the banking system as a whole? Does this responsibility extend to other sectors of the financial system?

3. How and on what terms should the lender of last resort make aid available? Via open market operations? Emergency loans through the discount window? If the latter, should a penalty rate be charged?

4. Is the central bank's crisis-averting function in conflict with its monetary-control function? Can the bank effectively act as an unconstrained last-resort lender within a policy framework emphasizing stable monetary growth?

5. What is the overriding objective of the lender of last resort? To prevent bank failures *per se*? To arrest a massive forced sale of assets and the consequent collapse of asset values? To insure that financial institutions will be able to meet their loan commitments? Or to prevent panic-induced reductions in the money stock?

6. How has the central bank's lender of last resort function been influenced by (1) the availability of deposit insurance and (2) the FDIC's procedure in handling bank failures?

The current debate over these issues has been confined to a rather esoteric circle of professional experts. It has not produced—nor will it likely produce—anything like the rich literature generated by the running debate over similar issues in 19th century England. For that matter, it appears to have been carried on with little in the way of reference to this earlier literature. One result is that the lender of last resort concept itself appears to have lost some of the clarity and precision of its original formulation, which embodied a specific set of policy rules and precepts. The term “lender of last resort” has been bandied about freely but it is clear that the meaning it now conveys varies, and perhaps widely, from user to user. In particular, the term has not always been used to convey the sense intended by its classical framers.

It should be noted at the outset that the pristine notion of lender of last resort emerged as a prescription for central bank action in an English banking and monetary system that differed markedly from that in the U.S. in the second half of the 20th century. For one thing, the U.S., unlike 19th century Britain, is no longer on the gold standard, the last effective link between gold and the money supply having been severed in 1968. Departure from the gold standard removes one constraint on the lender of last resort,

namely the necessity of protecting the gold reserve and preserving the gold convertibility of paper currency at a fixed rate of exchange. A second difference between the two financial systems was created in the 1930's by the introduction of Federal deposit insurance, an innovation that now protects the U.S. banking system and most depositors. Deposit insurance has removed a chief cause of panics and bank runs, namely loss of public confidence in the banking system's ability to convert demand deposits into cash. Consequently, there is now less danger of the recurrence of old-fashioned cash drains, i.e., those massive, panic-induced withdrawals of coin and currency, which, in fractional reserve banking systems, used to be a chief source of multiple reductions in the money stock. Third, the essentially unit-banking system in this country, featuring literally thousands of banks operating in market areas limited geographically, contrasts with the incipient branch banking system of late 19th century England, in which a relatively small number of banks were beginning to serve an essentially national market. A branch system with its capability of channeling funds quickly from the financial center to outlying areas may have less need for last-resort loans than a unit system in which individual banks or localities lack adequate access to money market supplies of cash. These and other key differences in banking and monetary environments account for many of the variations wrought on the classical lender of last resort concept in this country.

Given the current interest in the lender of last resort function, it is useful to examine the original version of that concept if only for purposes of clarification and historical perspective. This article, therefore, traces the emergence of the classical doctrine of the lender of last resort in 19th century England and discusses the content of that doctrine. The first section of the article extracts from the writings of leading 19th century banking theorists the basic tenets of the classical doctrine. These tenets are then listed in the second and concluding section.

NINETEENTH CENTURY VIEWS OF THE DUTIES OF THE LENDER OF LAST RESORT

Henry Thornton The principal architects of the classical lender of last resort doctrine were Henry Thornton, who wrote at the beginning of the nineteenth century, and Walter Bagehot, whose chief writings appeared during the third quarter of the century. In his 1802 classic, *The Paper Credit of Great Britain*, Thornton expounded on many issues relating to central banking, but four in particular are

especially relevant today. The first concerns a possible conflict between the central bank's responsibility as controller of the money supply and its function as lender of last resort. To the extent that the central bank bears the responsibility for providing a stable framework of monetary growth, it must exercise a moderate and continued restraint on the rate of monetary expansion. But coping with unusual liquidity strains through exercise of the lender of last resort function calls for abandonment of this restraint and relinquishing control over monetary growth. Hence, some banking specialists have noted an apparent conflict between these two central banking objectives.

Thornton, however, saw no inconsistency between a policy of stable monetary growth and the sort of action required to deal with liquidity crises. In the following passage, which Joseph Schumpeter has called the Magna Charta of central banking, Thornton distinguishes between the long-run target growth path of the money stock and temporary emergency deviations from the path. The proper policy of the Bank of England, Thornton says, is

To limit the total amount of paper issued, and to resort for this purpose, whenever the temptation to borrow is strong, to some effectual principle of restriction; in no case, however, materially to diminish the sum in circulation, but to let it vibrate only within certain limits; to afford a slow and cautious extension of it, as the general trade of the kingdom enlarges itself; to allow of some special, though temporary, increase in the event of any extraordinary alarm or difficulty, as the best means of preventing a great demand at home for guineas*; and to lean to the side of diminution, in the case of gold going abroad, and of the general exchanges continuing long unfavourable; this seems to be the true policy of the directors of an institution circumstanced like that of the Bank of England. To suffer either the solicitations of merchants, or the wishes of government, to determine the measure of the bank issues, is unquestionably to adopt a very false principle of conduct. [2; 259]

Thus, to Thornton, the main responsibility of the central bank was to regulate the money stock so that it expands at a steady pace roughly comparable to the long-term trend growth rate of output. But the bank must also counter those severe specie drains that periodically threatened to deplete its gold reserve and force suspension of convertibility. These drains were of two types: (1) external or foreign, composed of exports of gold to cover an adverse balance of payments in the country's international accounts and (2) internal, consisting of panic-induced increases in the quantity of gold held by domestic residents. External drains call for a restrictive policy. In the case of a

* Thornton is here referring to the public's demand for gold coin, the guinea being the name for the standard gold coin in use in England at the time.

panic and internal drain, however, the bank should be prepared temporarily to expand sharply its note issue and its loans in order to satisfy the public's demand for liquidity. There need be no conflict between the monetary control and lender of last resort functions, however, since the first refers to the long run and the second to temporary periods of emergency. If the central bank, in its role as lender of last resort, responds appropriately to the threat of a liquidity crisis, the panic will be averted quickly. Consequently, the deviation of the money stock from its long-run target path will be small, both in magnitude and duration.

The second issue considered by Thornton concerns the extent of the lender of last resort's responsibility to individual banks as opposed to the banking system as a whole. Are these responsibilities strongly inter-related? Are banks so interdependent that the failure of one would endanger all the others? Is it therefore necessary that the lender prevent the failure of even unsound banks, i.e., are rescue operations necessary to preserve the stability of the payments mechanism? Thornton's answer is as follows:

It is by no means intended to imply, that it would become the Bank of England to relieve every distress which the rashness of country banks may bring upon them: the bank, by doing this, might encourage their improvidence. There seems to be a medium at which a public bank should aim in granting aid to inferior establishments, and which it must often find very difficult to be observed. The relief should neither be so prompt and liberal as to exempt those who misconduct their business from all the natural consequences of their fault, nor so scanty and slow as deeply to involve the general interests. These interests, nevertheless, are sure to be pleaded by every distressed person whose affairs are large, however indifferent or even ruinous may be their state. [2; 188]

Thornton, in this passage, makes four key points. First, the lender of last resort's primary responsibility is to the market ("the general interests") and not to the individual bank. The central bank has no duty to sustain particular institutions. Second, he advises against bail-out operations for banks whose distress arises from "rashness," "improvidence," or "misconduct." By subsidizing the risk-bearing function of poorly-managed banks, such rescue operations, he says, would encourage other banks to take excessive speculative risks without fear of the consequences. In short, individual imprudence should be punished by losses. Only if the financial repercussions of such punishment threaten to become widespread should the lender of last resort intervene. His third point, however, is that even in this latter case, aid should be extended sparingly and on relatively unfavorable terms. Finally, he is skeptical of the claim that eco-

nomical welfare is inevitably harmed when a bank fails. This argument, he notes, would provide every large bank, no matter how poorly run, with an automatic justification for aid. He is aware that occasionally the public interest may be better served by the demise of inefficient banks, i.e., that the resulting improvements in resource allocation may outweigh any adverse spillover side effects of the failure.

The third issue addressed by Thornton was whether the lender of last resort should try to prevent shocks to the financial system. Here Thornton answered in the negative. The lender of last resort exists, he said, not to prevent shocks but to minimize the secondary repercussions following upon shocks. He argued that a panic could be triggered by any kind of "alarm," e.g., rumors of a foreign invasion, an initial bank failure, etc. The central bank has no responsibility for stopping these triggering events. But it does have a responsibility for arresting the panic and stopping it from spreading throughout the system. In his own words,

. . . If any one bank fails, a general run on the neighboring ones is apt to take place, which if not checked at the beginning by a pouring into the circulation a large quantity of gold, leads to very extensive mischief. [2; 180]

The proper response, according to Thornton, is not to stop the initial failure, but instead to pump liquidity into the market. In Thornton's view, the actual occurrence of a widespread panic would be properly attributable not to the event of the initial bank failure, but to the failure of the central bank to insulate the economy from the impact of that event. In this regard, he distinguished between the effects of (1) the closing of an individual bank and (2) policy errors of the lender of last resort. The closing of an individual bank, he says, by itself contributes very little to "general distress" or "general commercial difficulty." By contrast, policy errors of the lender of last resort create "a general shock to credit" that "produces Distress through the whole Kingdom." [2; 287-8, 304-5]

Finally, Thornton identified the paramount objective or primary purpose of the lender of last resort. Today, opinion varies as to the lender's ultimate objective, with all of the following being mentioned: (1) preventing widespread bank failures, (2) preserving confidence in the banking system, (3) preventing a massive dumping of assets and the consequent collapse of asset values, (4) guarding against the danger of massive currency withdrawals, and (5) insuring that banks and other lending institutions will be able to meet their loan commitments. Thorn-

ton, however, saw the lender of last resort's overriding objective as the prevention of panic-induced declines in the money stock, declines that might produce depressions in the level of economic activity.

The threat of a panic, he argued, tends to cause substantial shifts both in the public's preferences regarding the forms in which money balances are held and bankers' preferences concerning the volume of monetary liabilities—notes and deposits—they are willing to create per unit of reserves. Financial crises or other alarms shake the public's confidence in the ability of the banking system to convert its note and deposit liabilities into gold. Consequently, individuals suddenly desire to hold a larger proportion of their money balances in the form of gold or equally safe liquid assets such as Bank of England notes. The rise in the desired cash ratio (i.e., desired gold holdings as a proportion of other types of money balances) induces widespread attempts on the part of the public to convert notes and deposits into gold or its equivalent. Simultaneously, commercial banks, finding their solvency threatened, will contract their note issues sharply in an effort to raise the reserve ratio. Bankers will want to bolster their reserve ratios both to meet the likely heavy cash withdrawals and also to allay public suspicion of financial weakness.

The result of the rise in the currency and reserve ratios is a contraction in the money stock, unless the central bank introduces compensating changes in its note issue. And if the money stock contracts, Thornton argued, output and employment will be adversely affected. To prevent the onset of depression, therefore, the lender of last resort must temporarily increase its note issue to offset the impact of the rising currency and reserve ratios on the money stock. In short, by preventing panic-induced contractions in the money stock, the lender of last resort contributes to the stabilization of real economic activity.

Walter Bagehot The classical lender of last resort doctrine received its fullest development in the writings of Walter Bagehot. In his seminal 1873 volume, *Lombard Street*, Bagehot stressed many of the same points made earlier by Thornton. Following Thornton, he distinguished between the appropriate response to internal versus external cash drains. An internal drain, he said, should be countered by a policy of lending freely and vigorously so as to erase all doubt about the availability of bank accommodation. An external drain, however, should be met by a sharp rise in the central bank's lending rate, the high interest rate serving to attract foreign gold and encouraging the retention of domestic gold. This latter

action, Bagehot thought, was necessary to protect the nation's gold reserve, i.e., the gold component of the monetary base. Thus he stressed that

. . . the first duty of the Bank of England was to protect the ultimate cash of the country, and to raise the rate of interest so as to protect it. [1; 155]

A sufficient gold reserve, of course, was necessary both for the preservation of the gold standard and for the maintenance of public confidence in the gold convertibility of paper currency. Regarding public confidence, he argued that "a panic is sure to be caused" if the gold reserve falls below "a certain minimum which I will call the 'apprehension minimum.'" [1; 156-7] It follows that the lender of last resort should strive to keep its gold reserves above this critical threshold.

Bagehot thought that a persistent external drain would trigger an internal drain as the public, observing the diminution of the gold stock, would seek to convert deposits and country bank notes into gold. "Unless you can stop the foreign export," he said, "you cannot allay the domestic alarm." In this most likely case where "periods of internal panic and external demand for bullion commonly occur together," the lender of last resort must

. . . treat two opposite maladies at once—one requiring stringent remedies, and especially a rapid rise in the rate of interest; and the other, an alleviative treatment with large and ready loans. [1; 27]

Therefore, "the best remedy . . . when a foreign drain is added to a domestic drain" is the provision of "very large loans at very high rates." [1; 27, 28] Here is the origin of the famous Bagehot Rule—"lend freely at a high rate."

Like Thornton, Bagehot stressed that last-resort lending should not be a continuous practice but rather a temporary emergency measure applicable only in times of banking panics. And, in perfect accord with his predecessor, Bagehot argued that if the central bank responded promptly and vigorously, the panic would be ended in a few days, by implication an interval not long enough for the money stock to depart significantly from its appropriate long-run growth track.

Bagehot also viewed the lender of last resort as a primarily macroeconomic concept. The central bank, he said, bears the responsibility of guaranteeing the liquidity of the whole economy but not that of particular institutions in the economy. He prescribed last-resort lending as a remedy solely for pervasive general emergencies affecting the entire banking system. He did not prescribe the remedy for isolated

emergency situations affecting an individual bank or a few specific banks. Nor did he intend it to be used to prevent very large or key banks from failing as a consequence of poor management and inefficiency. As shown below, he did not think that support of such distressed key banks was necessary to forestall panics. Like Thornton, he emphasized that the task of the central bank was not to prevent initial failures but rather to prevent a wave of failures spreading through the system.

Bagehot also followed Thornton in arguing that the lender of last resort exists not to prevent shocks but to minimize the secondary repercussions following upon shocks. His views on this point are contained in his analysis of panics. A panic, he said, can be triggered by a variety of exogenous events—"a bad harvest, an apprehension of foreign invasion, a sudden failure of a great firm which everybody trusted." [1; 61] But "no cause is more capable of producing a panic, perhaps none is so capable, as the failure of a first-rate joint stock bank in London." [1; 29] The shock of this initial failure must be contained before it gets out of hand, for "in wild periods of alarm, one failure makes many." The problem is how to "arrest the primary failure" that causes "the derivative failures." Bagehot's solution, quoted below, stresses the liberal provision of liquidity to the whole system rather than loans to the distressed bank.

A panic, in a word, is a species of neuralgia, and according to the rules of science you must not starve it. The holders of the cash reserve must be ready not only to keep it for their own liabilities, but to advance it most freely for the liabilities of others. They must lend to merchants, to minor bankers, to 'this man and that man,' whenever the security is good The way in which the panic of 1825 was stopped by advancing money has been described in so broad and graphic a way that the passage has become classical. 'We lent it,' said Mr. Harmon, on behalf of the Bank of England, 'by every possible means and in modes we had never adopted before; we took in stock on security, we purchased Exchequer bills, we made advances on Exchequer bills, we not only discounted outright, but we made advances on the deposit of bills of exchange to an immense amount, in short, by every possible means consistent with the safety of the bank, and we were not on some occasions over-nice. Seeing the dreadful state in which the public were, we rendered every assistance in our power.' After a day or two of this treatment, the entire panic subsided, and the 'City' was quite calm. [1; 25]

Conspicuously absent is any mention of the need to channel aid to specific institutions, as would be implied by bail-out operations. Bagehot's emphasis is clearly on aid to the market rather than to the initially distressed bank. He obviously did not think it necessary to prevent the initial failure at all costs.

Up to this point, Bagehot has been depicted largely as a follower or disciple of Thornton. But Bagehot did more than just elaborate, refine, and coordinate Thornton's analysis. He also contributed several original points that added substance to the lender of last resort doctrine and advanced it beyond Thornton's formulation. At least five of these points deserve mention.

First, Bagehot distinguished between the central bank's extending support to the market after a crisis began and its giving assurance of support in advance of an impending crisis. He argued that the lender of last resort's duty did not stop with the actual provision of liquidity in times of crisis, but also involved making it clear in advance that it would lend freely in all crises. As he put it,

. . . the public have a right to know whether [the central bank]—the holders of our ultimate bank reserve—acknowledge this duty, and are ready to perform it. [1; 85]

This assurance alone, he thought, would dispel uncertainty about and promote confidence in the central bank's willingness to act, thus generating a pattern of stabilizing expectations that would help avert future panics.

Second, he advocated that last resort accommodation be made at a penalty rate. Borrowers should have relief in times of crisis, but they should be prepared to pay a price that implied a stiff penalty. The central bank has a duty to lend, but it should extract a high price for its loans. A penalty rate had the appeal of distributional equity, it being only fair that borrowers should pay handsomely for the protection and security afforded by the lender of last resort. Distributive justice aside, the penalty rate, Bagehot claimed, would produce at least three additional beneficial results. First, it would encourage the importation and prevent the exportation of specie, thus protecting the nation's gold reserve. It would achieve this result (1) by attracting short-term capital from abroad, and (2) by exerting a deflationary influence on the level of economic activity and domestic prices, thus improving the external balance of trade. Second, the high rate of interest would reduce the quantity of precautionary cash balances that overcautious wealth-holders would want to hold. Without the high rate to deter them, these cashholders might deplete the central gold reserve. As Bagehot put it, the penalty rate would serve as "a heavy fine on unreasonable timidity," prompting potential cashholders to economize on the nation's scarce gold reserve. [1; 97] In this connection, he advocated that the penalty rate be established

... early in the panic, so that the fine may be paid early; that no one may borrow out of idle precaution without paying well for it; that the Banking reserve may be protected as far as possible. [1; 97]

Last and most important, the penalty rate would provide an incentive for banks to exhaust all market sources of liquidity and even develop new sources before coming to the central bank. By encouraging individual banks to develop better techniques of money management and the capital market to develop new channels to mobilize existing liquidity, the penalty rate would promote allocative efficiency in the financial system. In short, the penalty rate would protect the gold reserve, strengthen the free market, discourage reliance on the central bank, and insure that recourse to the latter's lending facilities was truly a last resort.

Bagehot's analysis, it should be noted, implies still another use for the penalty rate, namely that of providing a test of the soundness of distressed borrowers. A penalty rate set a couple of percentage points above the market rate on alternative sources of funds would encourage illiquid banks to turn to the market first. Success in obtaining accommodation at the market rate would indicate that lenders judge these borrowers to be a sound risk. The borrowers and their assets would pass the market test. On the other hand, resort to the central bank would tend to indicate weaknesses in the borrowing institutions. The banks may be unable to borrow in the market at the lower rate. Fearing default, lenders may demand a risk premium in excess of the difference between the market and the penal rate. The risk premium would force the stockholders of the banks to make a decision either to close the banks, to arrange a merger with other banks, or to resort to the central bank's lending facility. Either way, the penalty rate will have provided a test of the banks' soundness.

Bagehot's third contribution was his specification of the types of borrowers the lender of last resort should accommodate, the kinds of assets it should lend on, and the criteria it should use to determine acceptability of those assets. Regarding the types of borrowers, Bagehot stated that the Bank of England should be willing to accommodate anyone with good security. Last resort loans, he said, should be available "to merchants, to minor bankers, to this man and that man." The objective of the central bank in time of panic is to satisfy the market's demand for liquidity. It makes little difference, said Bagehot, whether this objective is accomplished via loans to merchants, to bankers, or to whomever.

Concerning the type of collateral on which the central bank should lend, Bagehot's answer was clear. The Bank should stand ready to lend on any and all sound assets, or as he put it, "on every kind of current security, or every sort on which money is ordinarily lent." Besides the conventionally eligible bills and government securities, acceptable collateral should include "all good banking securities," and perhaps even "railway debenture stock." In another passage he makes the point that the "*amount* of the advance is the main consideration . . . not the nature of the security on which the advance is made, always assuming the security to be good." The basic criterion was that the paper be indisputably good in *ordinary or normal times*. The latter qualification is important. It implies that the lender of last resort should not be afraid to extend loans on assets whose current market value is temporarily below book value owing to depression in the securities market.

To summarize, Bagehot felt that few restrictions should be placed on the types of assets the central bank might lend on, or the kind of borrowers it might accommodate. This position was consistent with his advocacy of price as opposed to non-price rationing mechanisms. He recommended that the central bank eschew qualitative restraints—eligibility rules, moral suasion, administrative discretion and the like—and instead rely on the penalty rate to ration borrowing.

Fourth, Bagehot provided a precise delineation of the extent of the lender of last resort's responsibility to individual banks as distinguished from the banking system as a whole. Concerning the question of whether this responsibility included assistance to insolvent banks, Bagehot's answer was an unequivocal no. The central bank's duty, he said, is not to rescue "the 'unsound' people" who constitute "a feeble minority." Such businesses, he said, "are afraid even to look frightened for fear their unsoundness may be detected." [1; 97] In short, the job of the central bank is not to prevent failure at all costs but rather to confine the impact of such failure to the unsound institutions alone.

Bagehot meant for his strictures to apply even to those key banks whose failure, in the absence of central bank action, could shatter public confidence and start a falling-dominoes chain-reaction sequence of financial collapse. Thus, he acknowledges that if

owing to the defects in its government, one even of the greater London joint stock banks failed, there would be an instant suspicion of the whole system. One *terra incognita* being seen to be faulty, every other *terra incognita* would be suspected. If the real government of these banks had for years been known, and if the subsisting banks had been known not to be ruled by the bad mode of govern-

ment which had ruined the bank that had fallen, then the ruin of that bank would not be hurtful. The other banks would be seen to be exempt from the cause which had destroyed it. But at present the ruin of one of these great banks would greatly impair the credit of all. Scarcely any one knows the precise government of any one; in no case has that government been described on authority; and the fall of one by grave misgovernment would be taken to show that the others might as easily be misgoverned also. And a tardy disclosure even of an admirable constitution would not much help the surviving banks: as it was extracted by necessity, it would be received with suspicion. A skeptical world would say 'of course they say they are all perfect now; it would not do for them to say anything else.' [1; 129]

Even in this case, however, Bagehot did not think it appropriate for the central bank to extend aid to poorly-governed key banks. Rather it is "the 'sound' people, the people who have good security to offer" who constitute "the majority to be protected." The lender of last resort function should not be interpreted to mean that unsound banks should not be permitted to fail. Instead it implies that failure should not be allowed to spread to sound institutions. To Bagehot, the distinction is crucial. In his words, "no advances indeed need be made" on assets on "which the [central] Bank will ultimately lose." Again, in another passage he offers assurance that if the lender of last resort "should refuse bad bills or bad securities" it "will not make the panic really worse." To arrest a panic, he says, it is sufficient that the Bank guarantee to provide liquidity to the "solvent merchants and bankers" who comprise the "great majority" of the market. This policy assures that "the alarm of the solvent merchants and bankers will be stayed." [1; 97]

Finally, Bagehot warned against undue reliance on the lender of last resort and stressed the need to strengthen individual banks. The central bank, he pointed out, was not meant to be a substitute for prudent bank practices. Consistent with his *laissez-faire*, free market philosophy, he argued that the basic strength of the banking system should rest not in the availability of last resort accommodation but rather on the resources and soundness of the individual banks. In this connection he stated that

. . . we should look at the rest of our banking system, and try to reduce the demands on the Bank [of England] as much as we can. The central machinery being inevitably frail, we should carefully and as much as possible diminish the strain upon it. [1; 36]

He described in glowing terms the self-reliant character of "the natural system of banking," composed "of many banks keeping their own cash reserve, with the penalty of failure before them if they neglect it." [1; 160] Elsewhere he pointed out that "under a good system of banking . . . a large number of banks, each feeling that their credit was at stake in keeping a good reserve, probably would keep one; if any one did not, it would be criticized constantly, and would soon lose its standing, and in the end disappear." [1; 52] In relying on its own soundness rather than the resources of the central bank, such a system, he noted, "reduces to a minimum the risk that is caused by the deposit. If the national money can safely be deposited in banks in any way, this is the way to make it safe." [1; 53]

One final observation should be made concerning Bagehot's views on the most appropriate panic-combating instrument of the central bank. Today many banking experts regard open-market operations rather than discount-window accommodation as the most effective way to deal with systemic liquidity crises. Bagehot probably would have agreed. True, he consistently prescribed loans rather than open-market purchases of assets as the means of stopping panics, but only because the latter weapon was not widely used in his day. Had the technique of open market operations been highly developed at that time, he undoubtedly would have approved of its use, at least in those cases where there was no danger of the gold stock being depleted by a foreign drain. On these occasions, Bagehot was for resorting to the most expeditious means of stopping an internal cash drain. Open market operations are quite consistent with his dictum "that in time of panic" the central bank "must advance freely and vigorously to the public . . . on all good banking securities; and as largely as the public ask for them." [1; 96-7] Moreover, open market operations also would have appealed to his preference for market-oriented allocation mechanisms. He would have approved of this particular policy instrument, which regulates the total amount of money but not its allocation among users or uses.

Shortcomings of the Classical Concept A picture of the classical doctrine as a consistent and fully self-contained set of policy rules is not altogether correct, for the doctrine does contain several weaknesses.

First, it offers little in the way of specific guidelines for distinguishing sound from unsound institutions. Yet this is precisely the kind of knowledge the lender of last resort needs in deciding whether to grant or withhold aid. What criteria should the central bank use to determine whether a bank is solvent or insolvent? How does one decide which assets are good and which bad? Unfortunately the classical doctrine does not say.

Second, the classical doctrine shows insufficient awareness of the complexities involved in determining the condition of distressed banks. Neglected is the fact that the activities of examination, auditing, investigation, and analysis—all required for a proper determination of a bank's condition—are necessarily time-consuming processes. In the simplistic classical view, unsound banks are quickly and irrevocably revealed as bankrupt and are allowed to fail at the outset. In the real world, however, things are seldom that simple. In particular, it may be necessary to extend last-resort loans to distressed banks simply to purchase the time required for the authorities to make an informed judgment of the condition of the banks.

The third and perhaps most serious shortcoming of the classical doctrine is its failure to specify the lender of last resort's role in protecting the depositors and noteholders of failed banks. When a poorly-managed bank fails there is good reason for the stockholders and management to be punished by losses. But there is less justification for the depositors and noteholders having to bear the consequences of management errors. Hence it may be desirable that some mechanism be established to transfer the deposit and note liabilities of the failed bank, together with matching assets, to other institutions. Such arranged mergers may take time, however. During the transition period the central bank may have to make loans in order to permit the merger to be accomplished in an orderly fashion. Unfortunately, there is no recognition of this possible merger-facilitating role for the central bank in the classical doctrine.

KEY COMPONENTS OF THE CLASSICAL DOCTRINE

This article has sketched the development of the classical concept of the lender of last resort in 19th century England and pointed out several of the short-

comings of that concept. The principal conclusions can be stated succinctly. The classical doctrine that emerged during the 19th century was a predominantly market-oriented, macroeconomic, penalty-rate concept that stressed the following points:

(1) Assuming the central bank acts appropriately in a crisis, there need be no conflict between its monetary control and lender of last resort duties. Prompt and vigorous action will stop any panic before the money supply has gotten too far off track.

(2) The lender of last resort's responsibility is to the entire financial system and not to specific institutions.

(3) The lender of last resort exists not to prevent the occurrence but rather to neutralize the impact of financial shocks. The lender must prevent the spread of shock waves through the financial system.

(4) The lender's duty is a twofold one consisting first, of lending without stint during actual panics and second, of acknowledging beforehand its duty to lend freely in all future panics.

(5) The lender should be willing to advance indiscriminately to any and all sound borrowers on all sound assets no matter what the type.

(6) In no case should the central bank accommodate unsound borrowers. The lender's duty lay in preventing panics from spreading to the sound institutions, and not in rescuing unsound ones.

(7) All accommodation would occur at a penalty rate, i.e., the central bank should rely on price rather than non-price mechanisms to ration use of its last-resort lending facility.

(8) The overriding objective of the lender of last resort was to prevent panic-induced declines in the money stock (Thornton) or at least the gold-reserve component of the monetary base (Bagehot).

(9) The basic strength of the banking system should rest not on the availability of last resort loans but on the resources and soundness of individual banks. Sound and prudent banking, rather than reliance on last-resort accommodation, is the hallmark of a secure banking system.

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